

## COTTAGE HOSPITALS. By THOS. W. ALDWINCKLE [F.]

MUCH of the best work done in this world is in the way of small things, in a kind of undereurrent below the greater matters which claim prominence and attract great popular sympathy. It is a characteristic of this work that it is generally well done, mainly because it is in the hands of those who do it for its own sake, in a quiet, unostentatious way, and have the advantage of thoroughly knowing what they want, and how to do it or get it. And much of this good work is none the less useful, but rather more so, when it is a kind of handmaiden to greater ideas with which it is in sympathy, or whose greater work it is only too happy to supplement in its own modest and yet useful way. A community is indeed fortunate that possesses citizens who are content thus to work, as it were, "underground," with little prospect of State recognition, or of the prestige attaching to more prominent though not more useful undertakings.

Reflections such as these arise upon reading Sir Henry Burdett's most interesting book on *Cottage Hospitals*, a third edition of which has recently been published.\* This is virtually a new book on the subject, as fifteen years have elapsed since the second edition was brought out, during which time the Cottage Hospital movement has made such great strides that the subject has had practically to be re-written in order to bring the book up to date. Sir Henry Burdett is so well known as a master of the whole subject of hospitals, great and small, their planning and construction, their administration and finance, that it is almost needless to say that the present work is of most valuable interest, not only as a history of the cottage hospital movement, but also as a text-book full of the best information as to the designing and administration of these institutions, and one that should be in the possession of every architect. Our more immediate concern would naturally be with the architectural aspect of the subject, but it would be quite impossible to do justice to the work unless some reference were made to the other and not less important contents of the book.

The cottage hospital movement began, as many excellent things have done before, in a very small way; nor were hostile criticism and unfriendly indifference wanting. The late Mr. Albert Napper, of Cranleigh, was the author of the first work on the subject.† But he was also, undoubtedly, the actual founder of the movement, for he established the first cottage hospital at Cranleigh, in Surrey, in the year 1859, by the conversion of an ordinary Surrey cottage into a hospital at a cost of about £50. The medical profession further

\* *Cottage Hospitals*. By Henry C. Burdett. 8o. Lond. 1896. Price 10s. 6d. [The Scientific Press, Limited, 428, Strand.]

† *On the Advantages derivable by the Medical Profession and the Public from Village Hospitals*, 1864; 3rd edition, 1866.

helped the good cause by pamphlets and books, Dr. Wynter,\* Mr. F. H. Harris,† Dr. Waring,‡ and Dr. Swete § being, among others, "forwards" in the good work. The movement soon received the influential support of *The Builder* newspaper, which fully appreciated the value of these hospitals, and accurately foreshadowed the success of the movement in rural districts.

As the author truly says, "it is but bare justice to the early promoters and authors that we should pay a tribute to the wisdom and foresight they displayed in propounding a scheme for general adoption which proved so successful in practice. Its simplicity, its ready adaptability, to the requirements of country districts, and its successful working, everywhere have raised the cottage hospital system high in public esteem." From the early days to the present time the progress of the movement has been steady, sure, and encouraging. So long ago as 1880 there were only five counties in England which did not possess at least one cottage hospital. Since that time these institutions have been promoted at the rate of about ten or fifteen per annum, with the result that in the year 1895 there were 294 cottage hospitals in existence, and only three counties which did not possess one. These should be named, in the hope that better things will prevail in the future: they are Huntingdon, Monmouth, and Rutland. In this connection it may be mentioned that Rutland, with a population of 22,000, has no hospital accommodation whatever, or, at all events, had none in 1895, when this edition of Sir Henry Burdett's book was written. It should be borne in mind that in rural districts there should be, according to the best authorities, hospital accommodation to the extent of one bed for every 1,000 inhabitants. During the development of the cottage hospitals there have necessarily been a few failures, but these were only in the earlier stages; and it is satisfactory to learn that in recent years the author has not met with a single instance where a cottage hospital has been established and subsequently discontinued. This is strong testimony, not only to the value of these institutions, but to the excellence of their management.

As to the benefits which these cottage hospitals render to society, particularly in rural districts, the author bears abundant testimony. The system provides against the evils of indiscriminate medical relief; puts the hospital patient into the position of being able to pay something, however small, according to his means, for the treatment he receives. It further secures justice to the medical profession, each doctor being free to follow his patient into the cottage hospital wards. Above all, it provides hospital accommodation in numerous rural districts, where the advantages of the larger urban hospitals are not available, giving a sufficient supply of food, constant and regular medical supervision, and avoiding the dangers attending a long and wearisome journey. To the country medical practitioner the cottage hospital confers many advantages. It raises his professional status, and enables him to treat, under proper hygienic surroundings, surgical cases which must, under other circumstances, have been sent to the county hospital. This increases his experience and knowledge, with advantage to his more wealthy patients. To quote the author: "The lessons learnt day by day in the cottage hospital become, in time of need, valuable in the ancestral hall, 'the peasant's misfortune' being 'the means of saving the life of the squire.'" Not the least benefit accruing from these institutions is the securing the permanent services of good nurses for rural districts. The foregoing are some of the principal benefits conferred upon society by these cottage hospitals, and their enumeration fully accounts for the permanent success of the movement.

\* Dr. Wynter, *Good Words*, May 1, 1866.

† *Remarks on the Establishment of Cottage Hospitals*,  
By F. H. Harris, M.R.C.S. 1866.

‡ *Cottage Hospitals: their Objects, Advantages, and*

*Management.* By E. J. Waring, M.D. 1867.

§ *Handy Book of Cottage Hospitals.* By Horace Swete,  
M.D. 1870.

Dealing now with the architectural part of the book, this is considered by the author in considerable detail, and is illustrated by numerous plans, two of which are reproduced [pp. 412, 414] by way of illustration. It may not be out of place here to take exception to the expression "cottage hospital" as misleading. Mr. Albert Napper, in his pamphlet, which was the first publication on the subject, alludes to them as village hospitals, which would appear to be a much more correct description. It is true that in the earlier stages, as indeed at Cranleigh, these institutions were cottages pure and simple; but the modern cottage hospital is of a very different type, being, as a rule, an entirely new building, built for and as a hospital, and arranged according to modern hospital and hygienic laws. And such would appear to be the right course where, as a general rule at the present time, the funds necessary for a new building are forthcoming, although, of course, not to the exclusion of an altered and adapted cottage in very poor districts, where the money for anything better is not available. In this connection one cannot do better than quote the author, as what he says raises a wide question: "Here we would point a moral which is apt to be lost sight of in the present day by the more zealous advocates of the cottage hospital movement. Originally the main principle advocated was simplicity in buildings, and indeed in everything. The present day has created a rage for new buildings, and it is within our experience, when paying visits of inspection to cottage hospitals up and down the country, to find that so long as simplicity prevailed, and an old building was utilised for the purpose of the cottage hospital, the hygienic conditions of the building and the surgical results were good. In process of time, when funds became fairly abundant, and were utilised to erect entirely new buildings and 'modern' sanitary fittings and methods of drainage, their unhealthiness began to make itself felt, and the surgical results were attended with greater difficulties, if they were not even occasionally defeated, by the impurities which found their way into the wards owing to the adoption of a 'modern' system of drainage. . . . The truth is that where there is no complete system of drainage in the village or township where the cottage hospital is situated, it is better for the health of the patients to avoid the 'water-carriage' system altogether, and to rest content with middens and earth-closets situated outside and apart from the cottage or other building which may be converted to hospital use."

As a matter of fact, we shall see as we proceed that the hospitals coming within the category of so-called cottage hospitals, and dealt with by the author in his book, can be well divided into two classes, viz. those of the cottage type pure and simple, and those of the "hospital" type. The former class would appear to be suitable for about three or four beds, and the latter for from six or ten to twenty-five beds. When we reach a larger number of beds than twenty-five we appear to have gone beyond the cottage hospital movement.

From a large number of excellent plans published in this book two are reproduced here as illustrative of two types of cottage hospitals. The other plans in the book, to which readers are referred, illustrate a variety of types of cottage hospitals, and I propose briefly to deal with some of these.

The cottage hospital at Cranleigh, Surrey, was not only the first of the movement, but even at the present day remains a very good type of the small cottage hospital pure and simple. The building was a very old cottage of the ordinary Surrey type, given by the rector free of rent, and adapted for its present purpose at a cost of about £50. As will be seen from the plan, accommodation is provided for four beds on the first floor, the administration being on the ground floor. This adaptation of an old cottage for hospital purposes is certainly very ingenious and economical, and shows what good results can be obtained from poor materials, and shows also that a cottage hospital of this type would be within the means

of any rural district. Here the nursing is placed in charge of a trained nurse, under the supervision of a ladies' committee.

The Petersfield Cottage Hospital represents another type of building (see page 250 in Sir Henry Burdett's book). This is still a very small hospital, being only for six beds, but it is a specially designed hospital building, and not an old cottage converted. There are

four wards, two with two beds each and two with one bed each, all on the ground floor, and admitting of classification of cases. The two bed wards have cross-ventilation, and the general plan is, with one important exception, very good and economical. The exception is the matter of sanitary arrangements. No bath-room is provided—a most necessary feature of even the smallest hospital—and the water-closets are placed in internal angles, and without any means of cross-ventilation. The cost, exclusive of furniture, was £1,400.

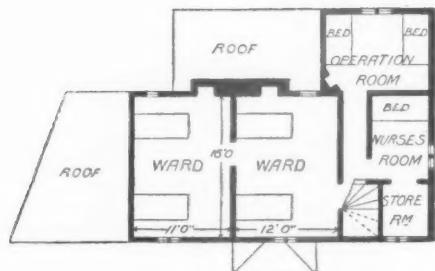
The Brixham Cottage Hospital represents still another type of the small hospital class (*ibid.* page 271). In this case the desire is, apparently, to adhere to the cottage, or at least to the dwelling-house, principle. There are three wards, only one of which has any approach to cross-ventilation; while the central hall, which is proportionately very large, and from

which the staircase rises, is absolutely without light of any kind. The large amount of bedroom accommodation on the first floor is explained by the fact that this institution provides for nursing the poor in their own homes, necessitating a larger sleeping accommodation for nurses than would otherwise be necessary. There is only one water-closet for patients' use, and this is placed in the bath-room.

The Watford Cottage Hospital (nine beds), of which the author speaks very highly, is apparently designed upon the "cottage" rather than the "hospital" principle (*ib.* page 264). There are male and female wards, each for four beds, and one ward for special cases; but the two main wards cannot be considered as having cross-ventilation, although they are well lighted and of cheerful aspect. This is a very compact plan—in fact, rather too compact; but it contains a large amount of corridor, the greater portion of which is very imperfectly lighted,

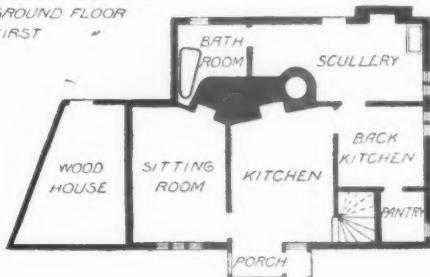
## COTTAGE HOSPITAL CRANLEIGH SURREY.

SCALE OF 10 5 0 10 20 30 40 50 FEET



FIRST FLOOR PLAN

THE BUILDING CONTAINS  
GROUND FLOOR  
FIRST



GROUND FLOOR PLAN

having only small skylights, with neither side nor end windows. The sanitary arrangements are good, the water-closets and sinks being placed in turrets connected with the main building only by a cross-ventilated lobby. The kitchen department is also fairly well separated from the hospital proper. There is a good operating-room, with a north light. The cost of the building, exclusive of site and furniture, was £1,800, or £200 per bed.

The Surbiton Cottage Hospital, for twelve beds, is of two storeys throughout, having an accident ward for one bed on the ground floor, the remaining eleven beds being on the first floor (*ib.* page 276). A special feature at this institution is a large room for convalescents on the ground floor. There is again a large amount of corridor in this plan, but it is fairly well lighted, especially on the first floor. The water-closets and ward sinks are all separated from the main building by a cross-ventilated lobby. It is not, however, a good feature to place a ward over the kitchen. The cost of the building was £3,000.

Of quite another type is the Livingstone Cottage Hospital, Dartford (*ib.* page 272). Accommodation is provided for eighteen beds; in one male ward for eight beds, one male special ward for one bed; and the like for females. The baths, lavatories, and water-closets are in separate turrets, cut off from the wards by a cross-ventilated lobby. It might be mentioned in this connection that while it is essential that water-closets and foul sinks should be thus separated, it is not necessary in the case of baths and lavatories. The lighting of the two main wards is anything but satisfactory, and the special wards might be considered as difficult of supervision if there is only one nurse. An excellent feature in this plan is the placing of the administration department, containing the kitchen, surgery, dispensary, and nurses' bedroom, in a separate two-storey building—an approach to the pavilion system, which is very desirable. The first stone of this hospital was laid 21st April 1894 by Mr. H. M. Stanley, the explorer.

The Beccles Cottage Hospital, providing accommodation for sixteen beds, has a very simple, and in many respects excellent, plan (*ib.* page 258). There are two main wards for five beds each, one for three beds, one private ward for one bed, and an accident ward for two beds, all except the latter being on the first floor. The main wards have good cross-ventilation. The corridors are all short and well lighted. The absence of sanitary turrets in connection with the main wards is a defect, there being apparently no slop-sink, and only two water-closets for the upper floor, these water-closets, which doubtless have to do duty as slop-sinks, &c., not being separated from the main building by cross-ventilated lobbies. There are also good arrangements for out-patients. It is not, as stated before, a good arrangement to place a ward over the kitchen. The latter should, in all cases where practicable, be a one-storey building with an open roof. Taken as a whole, this is an excellent type of plan for a hospital of this size.

The cottage hospital at Cheshunt, Herts, providing accommodation for six beds, is a most excellent type of a small hospital, as indeed would be expected from its designers (*ib.* page 260). It is singularly free from the defect of the "cottage" type, with which it has virtually nothing in common. There are two wards, each for three beds and with good cross-ventilation, and each with the water-closet and sink in a turret separated from the ward by means of a cross-ventilated lobby, the latter serving both as lavatory and as access to the gardens. There is no separate bath-room, but a recess is provided in the main corridor, in which is placed a movable bath—an economical arrangement which, in a small hospital like this, would doubtless be sufficient for all purposes. The corridors are short and well lighted. There is no operation room. The kitchen is well separated from the wards. There are two good bedrooms on the first floor. This may be given as a most excellent model of a very small hospital quite complete in itself. The building was designed by Messrs.

Keith Young and Hall, and cost £1,010—a very moderate expenditure for such good accommodation.

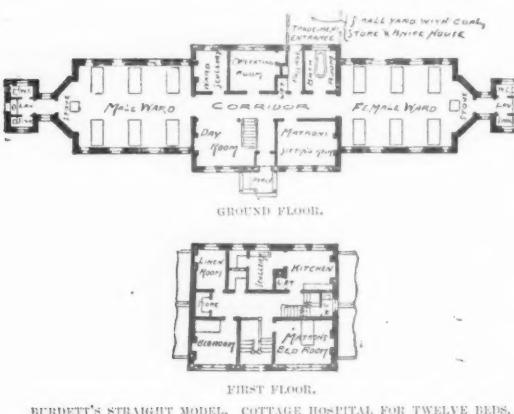
The last reference one need make to executed hospitals is the Grantham Hospital (*ib.* page 243). This contains accommodation for thirty-two beds. There are male and female wards, each for ten beds, a children's ward for nine cots, and an isolation block containing three beds. An institution of this size scarcely comes within the category of cottage hospitals; but when originally built, twenty years ago, there was provision only for twenty-three beds, the number having been increased up to thirty-two by addition of a children's ward. The wards are all well lighted, with good cross-ventilation; but the position of the water-closets in relation to the wards is not altogether satisfactory, the lobby separating them from the wards not being cross-ventilated. There is a most satisfactory absence of corridors. The kitchen is well placed in a position where smells cannot reach the wards. The total cost of building and furnishing, including new sanitary arrangements, was £8,412. The author, with perfect justice, speaks very highly of this hospital, and commends the plan to the attention of architects generally.

In addition to illustrating a very large number of existing hospitals, Sir Henry Burdett publishes some excellent plans of his own, to serve as models for future cottage hospitals. Laying down the principle that the purely pavilion system is too costly for hospitals having less than fifty beds, the author submits three "model" plans, one of which is reproduced here. Plan No. 1 is called "Burdett's Straight Model No. 1," and provides accommodation for ten beds in two wards of five beds each, one for males and one for females, with nurses' room and bathroom between. There are no special or separation wards. The wards are well lighted, with good cross-ventilation. The administration block is a separate building, connected with the ward pavilion by a covered way. This block contains kitchen, scullery, stores, operation room, and matron's room. This plan, the author suggests, would be suitable for an infectious hospital,

and he estimates the cost at £2,010 in London and about £1,500 in country districts.

Plan No. 2 provides for twelve beds, with the administration department in the same block and placed in the centre, thus completely separating the two wards. In this case the kitchen is on the first floor. The cost is estimated at £1,778, cubed out at sixpence per foot.

The third plan is entitled "Burdett's Villa Hospital Plan," and provides for ten beds in two wards, the female ward being on the first floor. The kitchen is on the ground floor. On the first floor are the matron's bedroom and



BURDETTE'S STRAIGHT MODEL COTTAGE HOSPITAL FOR TWELVE BEDS.

four other bedrooms, one of which could be used for isolating a special case. The author states that he does not like this plan so well as No. 2, but gives it in order to meet the predilections of those who consider that the sexes are more effectually separated by placing the female wards on the first floor. He estimates the cost at £1,988, cubed out at sixpence per foot.

These three plans undoubtedly suggest excellent types of small or cottage hospitals. The objectionable features of these institutions planned on the purely "cottage" principle, and already referred to, are avoided in these plans; the wards are all well lighted, and have good cross-ventilation; the water-closets and sinks are separated from the wards by cross-ventilated

lobbies, and there is the minimum of corridor. Of the three plans, we should give our preference to No. 2. The hospital is self-contained ; the sanitary turrets are placed at the ends, and not at the sides of the wards, thus avoiding the sacrifice of bed-space ; there is a good day-room, thrown open to the corridor, on the model of the Halstead Cottage Hospital ; and another excellent arrangement is that the kitchen is placed on the first floor.

From an examination of the various plans published in this book, it should not be a difficult matter to design a cottage hospital which would fulfil all necessary and proper modern requirements. There are, however, a few leading principles to be followed, which may be briefly considered here. For the purposes of a hospital for, say, three or four beds, in a rural district, the adaptation of an existing cottage will fully meet the case at a very small expense, and of this type the cottage hospital at Cranleigh will be found an excellent example. Such arrangements are, at all events, sufficient to commence with, and will frequently, as time goes on, give way to a new small hospital built upon modern lines, as in the case of the hospital at Bourton-on-the-Water, the third cottage hospital opened (in 1861), which was an adaptation of a substantial, but not a modern, building of three storeys. This was in use until 1879, when a new permanent hospital was erected at a cost of £887. Where, however, the number of beds reaches six it would be advisable to start, if possible, with a new building ; and this should be planned somewhat upon the lines of the Cheshunt Cottage Hospital, or upon one of Sir Henry Burdett's model plans.

In a small hospital there should be a ward for each sex, and these wards should be placed so as to have good cross-ventilation, with windows on both sides. The water-closet turrets should be at one end rather than at one side of the ward, from which they should be separated by a cross-ventilated lobby, which can also serve as a lavatory. Where the number of beds reaches eight it may be advisable to have one or, if possible, two single-bed wards for special cases. There should be a well-ventilated and well-lighted bath-room. Corridors should be avoided as far as possible, and such as are provided should be well lighted and ventilated. The building throughout should be of one storey only, except the central administration portion, in which, where possible, it is very desirable to have a day-room for convalescents. An operation-room is necessary : this should have a north light. The kitchen should be well separated from the wards, so as to avoid smells reaching them, and should have an open ventilating roof. If any wards are placed on the first floor, they should not, under any circumstances, be placed over the kitchen. A nurses' sitting-room is required, as also a small doctors' room and dispensary, which, in a small hospital, could be also used as a committee-room. Dark and unventilated spaces and corners are to be most carefully avoided. In these small hospitals the warming and ventilation will necessarily be of a simple character. We shall, fortunately, be free from mechanical ventilation, plenum systems, and other doubtful matters. Open windows will meet all requirements in the summer, and open ventilating fireplaces will be sufficient in winter, the incoming air being warmed in passing through air-chambers at the back of the grate. The author goes into somewhat minute detail as to the planning and construction of these cottage hospitals, and very properly emphasises the importance of simplicity and economy in design and construction, pointing out that an elaborately designed hospital is expensive to maintain, and may prove a serious burden to the committee, with the prospect of ultimate failure.

There are several very interesting and valuable chapters in the book dealing with the management of these institutions, their financial arrangements and administration, the nursing arrangements, the vexed question of paying patients, the payment of the medical practitioners, the question of lying-in wards, the question of the "ticket" as against the "free" system, together with a very interesting chapter upon cottage hospitals in America ;

but space does not admit of their being dealt with here. Enough has doubtless been written to show that cottage hospitals supply, and supply successfully, a great want previously felt in rural districts, where the advantages of the general hospital are altogether wanting. No one is entitled to speak on such a subject with more authority than Sir Henry Burdett, both as to the needs and their fulfilment. But there is a human as well as a professional aspect of most things, and Sir Henry Burdett has had a practical experience of the value of these cottage hospitals, of which he is so earnest an advocate, an account of which, to conclude this review, one cannot do better than give in his own words : " In God's good providence we have had evidence of the precise truth of our contentions in the person of one of our sons. This schoolboy, during the recent general election, while engaged in dragging the carriage of the member for the division round the quad at Marlborough College, was thrown down with others, and received very serious injuries, which in the absence of skilled medical treatment must have led to permanent disfigurement, if not to death. Fortunately, Dr. J. B. Maurice and his son, Dr. Thurlwall Maurice, members of the staff of the Savernake Cottage Hospital, were within call at the time of the accident. By their devotion and skill the lad's life was spared and the worst effects of his injuries were successfully removed. It is seldom that so painful and providential an example of the value of an author's teaching is brought home to him during his lifetime. In the case of this Marlborough boy the grateful father feels that any indebtedness and obligation on the part of cottage hospitals and their medical staffs and managers to himself have been entirely counterbalanced by the magnificent services rendered to his dear son by the surgeons of the Savernake Cottage Hospital."

\* \* \* The subjects of Hospital Planning, Warming, Ventilation, &c., are treated at length in the present series of the JOURNAL as follows :—Vol. I. No. 12, 1894, p. 439, "Hospitals," by William Henman [F.]; Vol. II. No. 9, 1895, p. 265, "Fever Hospitals," by T. W. Aldwinckle [F.]; *ibid.* p. 314, "Warming and Ventilation," by J. D. Sutcliffe; Vol. III. No. 2, 1896, p. 36, "Hygienic Ventilation," by J. Le Marchant Bishop; Vol. IV. No. 13, 1897, p. 333, "The Construction of Hospitals," by William Henman [F.].





9, CONDUIT STREET, LONDON, W., 29th July 1897.

## CHRONICLE.

### THE SPECIAL GENERAL MEETING.

#### The Fellows Question.

The Special General Meeting held on the 12th inst. was convened for the purpose of confirming the additional proviso to By-laws 9 and 15 agreed to at the Adjourned Special General Meeting of the 14th ult. [p. 396]. In the absence of the President the Chair was taken by Mr. H. L. Florence, Vice-President. Upon the Minutes of the Special Meeting of the 14th ult. being put for confirmation,

MR. SYDNEY B. BEALE [A.] asked permission to call attention to a few points on the Minutes of that Meeting, which would show that they were incomplete, and perhaps incorrect, and therefore should not be passed without amendment.\*

THE CHAIRMAN pointed out that Mr. Beale must limit himself either to verbal alterations or to any omission on the Minutes before them, but any irregular discussion involving matters of principle could not be allowed.

MR. BEALE said his first point concerned an omission. The Minutes contained no record of a protest that was made by certain members at the Adjourned Special Meeting of the 14th June. He suggested that that protest, which was made by several members, should be entered on the Minutes. In the second place certain resolutions passed at the Meeting were not properly voted upon and not properly carried. In the third place the Minutes stated that the Report was carried, and carried by a certain number of votes. He contended that the Report was not carried. Those were matters of fact which he was prepared to substantiate. He moved that the Minutes be amended in accordance with these facts.

MR. C. H. BRODIE [A.] seconded the alteration of the Minutes to the extent indicated by Mr. Beale. The protest was properly expressed, and should have been duly noted on the Minutes. Mr. Beale's second point, as to the voting on

certain resolutions, he would not go into. He had taken Counsel's opinion upon the matter, and Counsel did not agree with him. With regard to the third point: the Minutes stated that the whole Report was carried by a certain majority. That majority, however, was clearly not in compliance with the By-law. The By-law, he was advised, was in conflict with the Charter, and needed alteration. By-law 62 demanded for certain purposes a majority of at least two-thirds of the Meeting. The Report did not get that majority; it was therefore not carried, and it was for the Council seriously to consider what to do under the circumstances.

THE CHAIRMAN explained that in the Report of the Meeting which accompanied the Minutes in the JOURNAL, any objections raised by members were duly noted; therefore it scarcely seemed necessary to record any protest. But if it was the wish of the Meeting, there was no objection to the Minutes being amended to that effect. In regard to the second and third points, he thought that a closer study of the By-law and Charter would show that the contradiction was one in appearance only, and not a contradiction in fact. Therefore, as the confirmation of the Minutes was the immediate business before them, no time should be taken up in the discussion of the second and third points.

MR. J. MACVICAR ANDERSON said that in his experience as Chairman he had never known a protest entered upon the Minutes unless a distinct request were made on the part of the protestor that the protest should be entered upon the Minutes. The Secretary was perfectly right in this instance in omitting all reference to it. He submitted that the Minutes were right as printed, and that they should not be altered.

MR. THOMAS BLASHILL agreed with Mr. Anderson; no special protest was made, and there was therefore no need to mention it on the Minutes.

MR. WM. WOODWARD [A.] asked that By-law 61 might be read. In his judgment the proceedings which had occurred in the Institute subsequent to the Resolutions printed on p. 305 of the JOURNAL, before the discussion at the Special General Meeting on the 31st May, were entirely out of order.

THE CHAIRMAN ruling that that matter could not be discussed at the present Meeting, Mr. Woodward said that he would call attention to the whole proceedings in connection with this question on a future occasion.

It having been pointed out that the proper course was for Mr. Beale to specify the exact words he desired to be added to or taken from the Minutes, Mr. Beale referred to the paragraph on p. 396 beginning "On this and the two following Resolutions the Chairman ruled that, under the terms of the Charter, Associates were debarred

\* These Minutes are printed in the JOURNAL, No. 15, pp. 395-96.

from voting," and proposed that the following words be inserted: "A formal protest was made by several members against the ruling, on the ground that it was not in accordance with the By-laws"; and then to go on, "the vote, however" (instead of *therefore*) "was restricted to Fellows."

MR. LACY W. RIDGE [F.] pointing out that, as no formal protest was made, the words proposed to be inserted would be incorrect, Mr. Beale withdrew the word "formal." The Secretary having read the paragraph as proposed to be modified, Mr. Beale's amendment was put from the Chair, when 15 members voted in its favour and 15 against it. The Chairman being unwilling to exercise his privilege of giving the casting vote, a second count was called, when 15 again voted in favour of Mr. Beale's amendment, and 17 against it. The original motion that the Minutes be confirmed as printed being then put, 17 pronounced in their favour and 18 against, whereupon they were signed as correct.

The further business on the notice-paper with regard to the confirmation of the additions to By-laws 9 and 15 resolved upon at the Adjourned Special Meeting of the 14th ult. was then proceeded with, and concluded as recorded in the Minutes, p. 428.

#### THE SUMMER EXAMINATIONS.

##### The Preliminary : Newly registered Probationers.

At the conclusion of the special business before the Meeting of the 12th inst., the Chairman announced the results of the recent Examinations. The Preliminary was held in London, Manchester, and Bristol on the 15th and 16th ult., with the following results:—

	Passed	Relegated	Not passed
London . . .	34	25	3
Manchester . . .	13	5	3
Bristol . . .	6	4	0
	—	—	—
	53	34	6

The names of the candidates who have passed, together with those exempted from sitting for the Examination, making a total of ninety, have been entered on the Register of Probationers, and are herewith given in alphabetical order:—

AGATE: Charles Gustave; 17, Cooper Street, Manchester [Masters: Messrs. Royle\* and Bennett\*].  
 AITKEN: Alexander Raeburn; 7, Wharf Street, Stockton-on-Tees [Master: Mr. A. Harrison].  
 AMERY: Thomas Ford; 1, Princes Street South, St. Thomas, Exeter [Master: Mr. S. Dobell].  
 BARTON: Montague Downe; 84, Palace Gardens Terrace, Kensington [Masters: Messrs. Young\* & Hall\*].  
 BELFRAGE: James Herbert; Durham House, Portobello, Edinburgh [Master: Mr. Hippolyte J. Blane, A.R.S.A.].  
 BELLAIRS: Seaforth Clifford Mackenzie; 21, The Avenue, Castle Hill, Ealing, W. [Master: Mr. A. Harry Heron\*].  
 BERRILL: Ralph; 57, Gough Road, Edgbaston, Birmingham [Master: Mr. Alfred Reading\*].  
 BLOMFIELD: Alfred William; 102, Dempsey Street, Stepney, E. [Master: Mr. Ernest R. Barrow\*].  
 BROCKLESBY: John Sydney; 17, Fairlawn Villas, Merton Park, Surrey [Master: Mr. Frank E. Smeel].  
 BROHIER: Annesley Percival; 32, Great George Street, Westminster, S.W. [Master: Mr. E. H. Bourchier\*].  
 BROWN: Horace; 25, Dulmeny Avenue, Camden Road, N. [Master: Mr. R. Willey\*].  
 BURT: John Thomas; 79, Commercial Road, Grantham [Master: Mr. Robert C. Clarke].  
 BYRNE: Thomas Joseph; c/o Anthony Scott, Esq., 16, William Street, Drogheda, co. Louth [Master: Mr. Edward Carter\*].  
 CATT: Alfred Edward; 6, Eversfield Place, St. Leonards-on-Sea [Master: Mr. Arthur Wells\*].  
 CLARK: John Care; 15, Brankingham Terrace, Norton Road, Stockton-on-Tees [Master: Mr. A. Harrison].  
 CLEGG: Fred; Mumps House, Oldham [Masters: Messrs. Whitelegg & Whittaker].  
 COUCH: William Edward; 25, Linden Gardens, Bayswater Road, W. [Master: Mr. John T. Lee\*].  
 CRAWFORD: David Willian; 12, Carlton Street, Edinburgh [Master: Mr. Hippolyte J. Blane, A.R.S.A.].  
 CRIMP: Arthur Gerald; Colmer, Modbury, S. Devon [Master: Mr. T. W. Latham].  
 DANNATT: Percy Boothroyd; Lyndale, Westcombe Park Road, Blackheath, S.E. [Polytechnic Architectural School].  
 DAVIES: William James; Thornton Dene, Sidcup, Kent [Master: Mr. T. E. Lidiard James\*].  
 DAVSON: Percival May; 8, Manchester Street, Manchester Square, W. [Master: Mr. W. H. Seth-Smith\*].  
 DENSHAM: Sidney Charles; 42, Wellington Road, St. John's Wood, N.W. [Polytechnic Architectural School].  
 DOLL: Otto Sigismund; Hertford House, 256, Fulham Road, South Kensington, S.W. [Master: Mr. C. Henman\*].  
 DONNELLY: James Louis; 79, Calabria Road, Highbury, N. [Master: Mr. William Hague].  
 DRUMMOND: Bertram; 29, Preston Street, Fleetwood [Masters: Mr. T. A. Drummond & Sons].  
 EEDES: Arthur Avis; 76, Coppleston Road, Denmark Park, S.E. [Master: Mr. J. W. Brooker\*].  
 ELL: Reginald George Gordon; Lawn Bank, John Street, Hampstead, N.W. [Master: Mr. J. Douglass Mathews\*].  
 FARQUHARSON: Peter Charles; 3, Albyn Place, Aberdeen, N.B. [Master: Mr. A. Marshall Mackenzie, A.R.S.A.].  
 FINCH: Clifford; 17, Grandison Road, Clapham Common, S.W. [Master: Mr. C. E. Jackson].  
 FOXLEY: Allen, B.A. Cantab.; Carlton Rectory, Worksop [Master: Mr. C. Hodgson Fowler\*].  
 GEORGE: Clement; 5, Rosemount Terrace, Aberdeen [Master: Mr. A. Marshall Mackenzie, A.R.S.A.].  
 GORDON: Donald Macpherson; 41, Bath Street, Portobello, Edinburgh [Master: Mr. Henry F. Kerr\*].  
 GRACE: Lionel Upperton; 37, Norfolk Street, Strand [Master: Mr. R. Clarke Edwards\*].  
 GRAY: John Vincent; 18, Wilfred Street, Derby [Masters: Messrs. Naylor\* & Sale].  
 GREGG: Theodore; Teighmore, Sutton, Surrey [Master: Mr. Ebenezer Gregg\*].  
 GREEN: Walter Godfrey; Lincoln Cottage, Lincoln Road, Woking, Surrey [Master: Mr. Charles Barry\*].  
 GRIFFITHS: Thomas Henry; Ivy House, Cosknaige Road, Longton, Staffs [Master: Mr. James Lobley].

HALL: John Percy; 6, Victoria Grove, Kensington, W. [Master: Mr. Goldie].

HARDCASTLE: Henry Arthur; 36, Granville Road, Stroud Green, N. [Master: Mr. T. P. Davison].

HARDING: George Robinson Cuthbert; Lindum, Beckenham, Kent [Master: Mr. Ernest R. Barrow\*].

HARRISON: Shirley; 7, St. Martin's East, Leicester [Master: Mr. Stockdale Harrison\*].

HASLAM: James; Henley Villa, Uxbridge Road, Ealing, W. [Master: Mr. F. H. Jones].

HASLAM: Robert Heywood; 11, Gayton Crescent, Hampstead, N.W. [Master: Mr. C. F. A. Voysey].

HAXTON: Andrew David; 133, South Street, St. Andrews [Master: Mr. James Gillespie].

HENMAN: Charles Henry Rowed; Streteley, 38, Friend's Road, Croydon [Master: Mr. Charles Henman\*].

HOBBISS: Holland William; Penzance Villa, Washwood Heath Road, Birmingham [Master: Mr. A. J. Dunn\*].

HOUCHEIN: Harold Rogers; 12, West Smithfield, E.C. [Master: Mr. Frank E. Sme].

INSLEY: Ernest Eccleston; Old Studley, Wimborne Road, Bournemouth [Abingdon School].

JEFFERY: Herbert Murray; Cheriton, 77, St. Helen's Road, Hastings [Masters: Messrs. Jeffery & Skinner].

JONES: Harold William James; 31, Thornford Road, Lewisham Park, S.E. [Master: Mr. Edgar S. Underwood].

KEENAN: Joseph; 66, Newgate Street, Bishop Auckland [Master: Mr. William Perkins].

KOELMAN: Frederick Logan; 32, Great George Street, Westminster, S.W. [Master: Mr. E. H. Bourchier\*].

LOADES: Leonard Arthur; North Field House, Morpeth [Master: Mr. J. T. Cackett\*].

LORD: George Wilfred, B.Sc. Lond.; 42, John Dalton Street, Manchester [Master: Mr. Henry Lord\*].

LOVEDAY: William Taylor; Williamscote, Banbury [Master: Mr. W. E. Mills\*].

MCKENZIE: Henry Blinman; 13, Senghennydd Road, Cardiff [Master: Mr. E. H. Bruton\*].

MARR: William Percy; The Quay House, Kingsbridge, South Devon [Master: Mr. T. W. Latham].

MAYHEW: Robert Henry Tewers; Edmondsbury, Genoa Road, Anerley, S.E. [Master: Professor T. Roger Smith\*].

MAYS: Ashby John; West View, Yarborough Road, Lincoln [Master: Mr. J. H. Cooper].

MORRIS: Leon; 28, River Street, Carlisle [Master: Mr. C. J. Ferguson, \* F.S.A.].

NOBBS: Percy Erskine, M.A.; 4, Comely Bank, Edinburgh [Master: Mr. R. S. Lorimer\*].

NORRIS: Edward Berks; 301, Charles Road, Small Heath, Birmingham [Master: Mr. G. Repton Faulkner].

NYE: Edward Goodrham; Town Hall, Eastbourne [Master: Mr. W. Chapman Field].

OPIE: Wilfrid Maxwell; Glenside, Mannamead, Plymouth [Masters: Messrs. Hine\* & Odgers].

PAPWORTH: Alfred Wyatt; 8, Maitland Park Road, London, N.W. [Master: Mr. Arthur Cates\*].

PRINCE: Harry; 11, Clanricarde Gardens, W. [Westminster School].

QUAIL: John; 62, Shrewsbury Street, Old Trafford, Manchester [Masters: Messrs. Salomons\* & Steinhalt].

RALPH: Ernest Wyatt; 90, Swinley Road, Wigan [Masters: Messrs. Heaton, Ralph, & Heaton].

ROSS: James Gardner; 6, Kestrel Avenue, Herne Hill, S.E. [Masters: Messrs. Snell & Waterson].

ROWBOTHAM: Harry Arnold; 28, Vale Street, Denbigh, North Wales [Master: Mr. R. Lloyd Williams\*].

SCOBIE: James Thomson; Park Avenue, Dunfermline [Master: Mr. Andrew Scobie].

SCOTT: George Moffatt; Avenue Hall, St. Mark's Avenue, Leeds [Master: Mr. W. H. Thorp\*].

SHARP: Ernest Samuel; 32, Devonshire Street, Keighley, Yorks. [Masters: Messrs. Hodges & Farrar].

SHARP: George Lister Thornton; Newspaper Press Fund, 11, Garrick Street, W.C. [Haileybury College].

SIMPSON: William Begg; Rosehill, New Machar, Aberdeenshire [Master: Mr. A. Marshall Mackenzie, \* A.R.S.A.].

SPAIN: John Edward; Rand Rectory, Wragby, Lincs. [Master: Mr. W. Scorer\*].

SPRAGG: Gilbert; 4A, Cork Street, W. [Masters: Messrs. Read\* & Macdonald\*].

STEVENSON: Ernest Gabriel; 58, Thornlaw Road, West Norwood, S.E. [Master: Mr. Arthur Green\*].

SWINDELLS: Ernest James Jennings; 151, King Richard's Road, Leicester [Masters: Messrs. Goddard, \* Paget, \* & Goddard\*].

THOMAS: Noel; 22, Lockyer Street, Plymouth [Masters: Messrs. Hine\* & Odgers].

THORPE: Fred; 27, Queen Street, Oldham [Master: Mr. Thomas Taylor].

TREW: William George; Tanglin, Dulwich Rise, S.E. [Masters: Messrs. H. S. Legg\* & Son\*].

WELLS: Albert Randall; 25, Cornwallis Gardens, Hastings [Master: Mr. Arthur Wells\*].

WESTACOTT: Percy; Central Exchange, Plymouth [Master: Mr. R. H. B. Neal].

WILLIAMS: Aubrey Neville; Highfield, Queensbury, Yorks. [Master: Mr. James Ledingham\*].

WILLIAMS: Charles Lionel Fleming; 56, Kenninghall Road, Clapton, N.E. [Master: Mr. Rowland Plumbe\*].

WOODLAND: William Norton Ferrier; 135, Cold Harbour Lane, Camberwell, S.E. [Master: Mr. Leonard V. Hunt\*].

WRATTEN: Edmund Livingstone; Hellingley, Dingwall Avenue, Croydon [Master: Mr. James Williams].

WRIGLEY: Francis Carr; Fieldhead, Netherthorpe, Huddersfield [Master: Mr. William H. Thorp\*].

The asterisk (\*) denotes members of the Institute.

#### The Intermediate : Newly registered Students.

The Intermediate Examination was held in London, Manchester, and Bristol, on the 15th, 16th, and 17th ult., with the following results:—

		Passed	Relegated
London	.	29	21
Manchester	.	4	1
Bristol	.	2	1
		35	23

The following candidates passed, and are registered as Students:—

WOORE: Joseph Alfred [Probationer 1895]; Wilfred Street, Derby [Masters: Messrs. Naylor\* & Sale, Derby].

VERSTAGE: Arthur Halerow [Probationer 1894]; Park Villa, Meadow, Godalming [Master: Mr. C. Forster Hayward\*].

BROMLEY: Henry Thomas [Probationer 1893]; 182, Portway, West Ham, E. [Master: Mr. R. A. Briggs\*].

PRYKE: Louis Edward [Probationer 1894]; 18, Grenville Place, Brighton [Masters: Messrs. Nunn\* & Hunt].

GOODLAND: Joshua [Probationer 1893]; 1, The Parade, Roath, Cardiff [Master: Mr. G. E. Halliday\*].

COOPER: Harold [Probationer 1896]; Pleasington, nr. Blackburn [Master: Mr. Walter Stirrup].

GREGSON: Thomas Sedgwick [*Probationer* 1895]; 79, King Henry's Road, South Hampstead [Master: Mr. Burgess].

SMITH: Cyril Wontner [*Probationer* 1893]; 34, Woodberry Grove, Finsbury Park, N. [Master: Mr. Arnold Mitchell\*].

REYNOLDS: Edwin Francis [*Probationer* 1894]; 35, Trinity Road, Birchfield, Birmingham [Master: Mr. W. H. Bidlake\*].

PEARSON: Harry John [*Probationer* 1895]; 49, Parliament Street, S.W.

BALL: Theophilus Bradford [*Probationer* 1894]; 1, Albert Terrace, Weston-super-Mare [Master: Mr. S. J. Wilde].

GAMMELL: Kensington [*Probationer* 1895]; 30, Guildford Street, Russell Square, W.C. [Master: W. V. Gough].

SMITH: Thomas Marshall [*Probationer* 1896]; 39, Regina Road, Tollington Park, N. [Master: Messrs. Hesketh\* & Stokes\*].

GOSLETT: Alfred Harold [*Probationer* 1895]; Lime Place, Great Stanmore, Middlesex [Master: Mr. R. Selden Wornum\*].

PONTON: Harold Frederick [*Probationer* 1894]; Bryn Glas, Little-over-Hill, Derby [Masters: Messrs. Naylor\* & Sale].

HALE: Charles [*Probationer* 1895]; Fairfield, Queensberry Road, Kettering [Masters: Messrs. Talbot Brown\* & Fisher].

NEWMAN: Francis Winton [*Probationer* 1895]; 24, Burghley Road, Highgate Road, N.W. [Master: Mr. S. J. Newman\*].

DRIFFIELD: William [*Probationer* 1895]; Beech Mount, Harrogate [Master: Mr. W. H. Thorp\*].

NICOL: George Salway [*Probationer* 1895]; Newhall Chambers, Newhall Street, Birmingham [Masters: Messrs. Essex\* Nicol,\* & Goodman].

ABBOTT: Thomas Ernest [*Probationer* 1893]; St. Leonard's House, East Sheen [Master: Mr. E. Dewar Mathews].

BRIDGEN: Charles Henry Edward [*Probationer* 1895]; 29, Calthorpe Street, W.C. [Masters: Messrs. Truefitt & Watson\*].

CAYLEY: Henry, M.A. Cantab. [*Probationer* 1895]; Garden House, Cambridge [Masters: Messrs. R. Barry Parker & Raymond Unwin].

HARRIS: Emanuel Vincent [*Probationer* 1893]; 47, Bolsover Street, W. [Master: Mr. E. Keynes Purchase].

WHITE: Charles Ernest [*Probationer* 1893]; 2, Duchy Avenue, Harrogate, Yorks. [Master: Mr. T. E. Marshall].

PICKUP: Arthur [*Probationer* 1895]; 8, Granville Road, Blackburn [Masters: Messrs. Stones\* & Gradwell].

FOSTER: Alfred Herbert [*Probationer* 1896]; 21, Gordon Street, Gordon Square, W.C. [Master: Mr. E. O. Sachs].

BUTTERWORTH: Robert Hepburn, B.A. [*Probationer* 1895]; 38, Upper Bedford Place, W.C. [Master: Mr. John Slater\*].

BUTTERWORTH: Walter Cecil [*Probationer* 1895]; 38, Upper Bedford Place, W.C. [Master: Mr. John Slater\*].

DOUGLASS: Henry Archibald [*Probationer* 1892]; 14, Clifton Terrace, Brighton [Masters: Messrs. Bourchier\* & Galsworthy].

ELLIS: George Rowland [*Probationer* 1895]; London Road, Beccles, Suffolk [Master: Mr. Arthur Pells].

EMBLING: Jacques [*Probationer* 1894]; 24, Trinity Street, Dorchester, Dorset [Master: Mr. Galt Millar].

FEATHERSTONE: Henry Whitehead [*Probationer* 1894]; 43 Heaton Hall Road, Newcastle-on-Tyne [Masters: Messrs. Plummer\* & Burrell].

HEATH: John Stanley [*Probationer* 1895]; Kingsbridge House, Westcombe Park, S.E. [Masters: Messrs. Roger Smith\* & Son\*].

LOCOCK: Arthur Herbert [*Probationer* 1894]; 22, Palace Mansions, Addison Road, W. [Master: Mr. Aston Webb\*].

WATSON: Alfred Edward [*Probationer* 1893]; South Bank, Oakleigh Park, N. [Master: Mr. Sprague].

The asterisk (\*) denotes members of the Institute.

#### The Final: Qualifying for Candidature as Associate.

The Final and Special Examination was held in London from Friday, the 25th ult., to Thursday, the 1st inst. Thirty-three candidates were examined, of whom fifteen passed, and eighteen were relegated to their studies. The names of those who have passed, and qualified for candidature as Associate, are as follows:—

BATES: William Stanley [*Probationer* 1894, *Student* 1895]; 59, Clarence Road, Clapton.

CORAM: James Henry [*Probationer* 1894, *Student* 1895], 95, Elspeth Road, Clapham Common, S.W.

FLEMING: James Richard; 93, Cambridge Street, Warwick Square, S.W.

HATCHER: George William; 35, Finsbury Circus, E.C.

HILL: Richard Henry Ernest [*Probationer* 1892, *Student* 1894]; St. Keverne, Bromley, Kent.

HONNOR: Timothy [*Probationer* 1889, *Student* 1891]; 17, Buckingham Street, Strand, W.C.

MARSHALL: Ernest William [*Probationer* 1895, *Student* 1895]; 139, Oxford Street, W.

MEREDITH: Percy William [*Probationer* 1890, *Student* 1893]; 20, Deerbrook Road, Herne Hill, S.E.

MORRIS: Percy [*Probationer* 1892, *Student* 1894, *Cates Prizeman*]; 97, St. John's Park, Blackheath, S.E.

REAY: Samuel Sebastian; Octagon Chambers, Milsom Street, Bath.

ROCHESTER: Charles Dixon [*Probationer* 1890, *Student* 1893]; 13, Devonshire Place, Newcastle-on-Tyne.

SHAW: Arthur Joseph Singleton [*Probationer* 1891, *Student* 1893]; 27, Queen Street, Oldham.

SINNOTT: Herbert Cyril [*Probationer* 1890, *Student* 1893]; St. Kilda, Westbury-on-Trym, near Bristol.

SMITH: Osgood [*Probationer* 1890, *Student* 1893]; 87, Hanley Road, Crouch Hill, N.

TRIMMELL: Harold Conybeare [*Probationer* 1892, *Student* 1894]; White Cliff, Woldingham, Surrey.

The following table shows the number of failures among the relegated candidates in each subject of the Final Examination:—

I.	Design	.	.	.	.	.	15
II.	History	.	.	.	.	.	8
III.	Mouldings and Ornament	.	.	.	.	.	13
IV.	Principles of Hygiene	.	.	.	.	.	11
V.	Materials	.	.	.	.	.	3
VI.	Strength of Materials	.	.	.	.	.	4
VII.	Construction	.	.	.	.	.	3
VIII.	Specifications	.	.	.	.	.	2
IX.	Professional Practice	.	.	.	.	.	3

#### The Standing Committees 1897-98.

Pursuant to By-law 46, the Council have appointed the following members to serve on the Standing Committees in addition to those elected by the Institute [see p. 379]:—

Art: Mr. L. Alma Tadema, R.A., Sir W. B. Richmond, R.A., Mr. Alfred Gilbert, R.A., Sir

James Linton, P.R.I. [Hon. Associates], and Mr. George Sherrin [A.]

*Literature* : Dr. A. S. Murray, Professor Baldwin Brown, Mr. J. D. Crace, Colonel Lenox Prendergast [Hon. Associates], and Mr. H. Heathcote Statham [F.]

*Practice* : Messrs. James Brooks, F. S. Brereton, J. Osborne Smith [Fellows], C. H. Brodie, and H. Hardwicke Langston [Associates].

*Science* : Messrs. H. F. Donaldson, Hugh Leonard, Professor Unwin, F.R.S. [Hon. Associates], H. Vaughan Lanchester, and Sydney B. Beale [Associates].

#### The New Government Offices Scheme.

The Committee of the House of Commons, presided over by Mr. Akers-Douglas, First Commissioner of Works, and entrusted with the duty of deciding as to the best way of utilising the various sites available for new Government offices in Great George Street, Spring Gardens, Downing Street, and Whitehall Place, resumed their sittings on the 30th ult.

Mr. J. Macvicar Anderson [F.], on behalf of the Royal Institute of British Architects, submitted an amended plan for the new War Office on the site of Carrington House. In this plan the frontage of the War Office to Whitehall, of about 400 feet, was proposed to be marked in the centre by a recessed quadrangle 170 by 140 feet, enclosed in front by an architectural screen; and on the same axial line as this quadrangle and screen it was proposed to form a corresponding screen on the other side of Whitehall, and at a distance of about 200 feet, as an approach to St. James's Park, somewhat after the manner and scale of Hyde Park Corner, thus bringing the Admiralty, the War Office, and the Horse Guards together in one scheme. He considered that this plan would produce a fine architectural effect, and with a four-storeyed building the same amount of accommodation would be afforded as in the Government plan of a five-storeyed building. In all other respects the plan was identical with the plan previously submitted on behalf of the Institute.

Mr. Arthur Cates [F.], on behalf of the Commissioners of Woods and Forests, explained how the Crown property would be affected under the scheme proposed by Mr. Edis for diverting Whitehall Place and continuing Great Scotland Yard directly into Charing Cross. He suggested that if the scheme for diverting Whitehall Place were adopted, Great Scotland Yard should not be continued into Charing Cross, but should be turned into Whitehall Place at about the present position of the cross street opposite the Fire Brigade Station. Under this plan it would be necessary to demolish all the houses between Whitehall Place and Great Scotland Yard, up to the Hôtel Métropole. It would be very undesirable to leave the property to the north of Whitehall Place in its present

condition. Under the plan proposed by the Institute, Whitehall Place would be entirely closed and shut off from direct access to Whitehall. The Commissioners of Woods would strongly object to this, and the persons interested in the Hôtel Métropole, the National Liberal Club, and the offices of the Ecclesiastical Commissioners would equally object. He regarded the plan of the Institute, as affecting the Crown estates, as far less satisfactory than that of Mr. Edis.

Sir John Taylor, K.C.B. [F.], representing the Office of Works, estimated the cost of acquiring the Great George Street site from the Institution of Civil Engineers right away to St. James's Park, and of erecting Government offices thereon, according to the Institute plan, as being about £800,000 greater than the cost of carrying out the Office of Works plan. In his view it was highly desirable that the Government should acquire the whole of the property referred to; and if they did so they would be able to house upon it the whole of the departments which required housing, without utilising the Spring Gardens site. He saw no objection to the Whitehall site for the new War Office proposed by the Institute except on the score of expense, but he regarded their original plan for the building as being most unfortunate in the case of a public office. The revised plan was a great improvement in every way. There were many objections to the closing of Whitehall Place. A four-storeyed building would be dwarfed by Whitehall Court and the National Liberal Club, and if the five-storeyed building were decided upon the building suggested by the Institute would be too large. The diversion of Whitehall Place, as proposed by Mr. Edis, was far preferable to the closing of it, as suggested by the Institute. The respective areas, under the plans for the new War Office, of the Office of Works, the Institute, and Mr. Edis were 111,000, 155,800, and 125,500 square feet, and he estimated that the cost of carrying out the Office of Works plan would be about £700,000 less than either of the others. There would be great advantage in leaving the Spring Gardens site unbuilt upon, inasmuch as the open space thus afforded would form a continuation of the Mall. Having regard to the increased work thrown on the Admiralty, it was essential that the Admiralty buildings should be enlarged. As regards the Downing Street site, he considered it was desirable to take down the Chancellor of the Exchequer's house, the offices of the Patronage Secretary of the Treasury, and all the buildings except the residence of the First Lord of the Treasury, round which a handsome railing should be placed. Dover House would form a very unsuitable residence for the First Lord of the Treasury, and if it were utilised for that purpose a new Scotch Office would have to be found.

The Select Committee met again on the 21st

inst., when, it is stated, Mr. Akers-Douglas's draft Report was practically agreed upon. They confirm the interim report of last year in favour of appropriating the site of Carrington House in Whitehall, opposite the Horse Guards, for the new War Office; they support the proposed widening of Parliament Street to a line parallel with the front of the Home Office; and they recommend an opening from the Mall to Charing Cross.

**International Congress of Architects and Retrospective Exhibition of Architecture at Brussels.**

This Congress, organised by the Société Centrale d'Architecture of Belgium, in connection with the Brussels Exhibition, will be held at Brussels from Saturday, 28th August, to Thursday, 2nd September next. The following are some of the questions to be discussed:—

1. Instruction in Architectural Art: should it be eclectic, or should it be limited to the principles of a school? What should be the programme?

2. Is an architectural diploma necessary?

3. Must one in the restoration of monuments (a) respect or correct mistakes of construction or errors of the ancients; (b) finish the portions of a work they did not finish; (c) suppress parts like construction or furniture for unity of style?

4. What steps should be taken to ensure to architects proprietorship of their designs?

5. By what means can a general fund be raised by architects for the protection of their common interests?

There will be an exhibition of architectural drawings and models, which will remain open to the 30th September; receptions, excursions to places of interest, and a banquet.

Tickets, price 20 or 30 francs, the latter including the banquet (without wine), may be obtained from M. Valère Dumortier, Avenue Duepétiaux 104, Brussels. The 30-franc tickets give a right to reduction of railway fares, free journey for excursions to Antwerp and the ruins of Villers, free admissions to the Exhibition, to reserved seats at the Monnaie Theatre, and to various public buildings and gardens.

**The late Hon. Charles Alexander Gore [Hon. A.]**

Mr. Arthur Cates [F.], whose connection with Mr. Gore had been long and intimate, has kindly penned the following notice:—

The number of Honorary Associates has recently been reduced by the death of the Hon. Charles Alexander Gore, who, elected in 1878, soon after the establishment of that class of members, continued up to his last illness to take considerable interest in the Institute and its Journal of Proceedings.

Born on 10th October 1811, he commenced Court and official life in 1827 as page in the household of the Marquis of Wellesley, Viceroy of Ireland; and, having served in the Paymaster-

General's Office and the Treasury, was in 1839 appointed Commissioner of Woods, Forests, and Land Revenues of the Crown, a position which he held with distinction till 1885, when he retired.

During the forty-six years of his office as Commissioner Mr. Gore controlled the management of the great estates of the Crown in England, and to his enlightened views is due the development of those estates in London and its neighbourhood, as well as that of the extensive agricultural properties.

He was a man of great activity and gaiety of spirit, and even so recently as the 21st ult., at his great age of eighty-five, he came up from Wimbledon, unattended, to call on the writer, as gay and brilliant in manner as when he retired. After a few days' illness he died on the 6th inst., and on the 10th was buried at Woolbeding Church, Sussex, on the estate of his daughter and son-in-law, Mrs. and Lieut.-Col. Lascelles. The Rev. Charles Gore, Canon of Westminster; Mr. Spence Gore, head of the firm of Smith & Gore, land agents; and Mr. Francis Gore, solicitor, Inland Revenue Office, are his sons.

**Mr. Justice Cave on Architects.**

In the case of *Jalland v. Tyler and Hind*, recently before Mr. Justice Cave at Nottingham, the learned Judge, in summing up, thus delivered himself on the value of expert evidence given by architects: "This was one of those unfortunate cases in which they had to listen to what architects came and told them. There were no such unsatisfactory men as architects, for they were always at the opposite poles to one another. All other scientific men tried to come to some sort of an agreement; but architects, on the other hand, tried to contradict each other entirely. That might be due to three causes, and three causes only. Which of these causes was the correct one was not for him to say. It might be that architecture had no science whatever about it. Secondly, there might be science in architecture, but the witnesses who had been called knew nothing about it. Thirdly, there might be science in architecture, and these men might possess that science, but not have the honesty to tell them truly what it was. One or other of these things must be true, or the architects would not be found differing so widely as they always did. In point of fact they helped the jury very little indeed, and they had, so far as they could, to come to a decision with as little regard to the architects as possible."

**Additions to the Library.**

An omission in the Library has been remedied by the addition of the late George Gilbert Scott's *Essay on the History of English Church Architecture prior to the separation of England from the*

*Roman obedience* [London, 1881]. The copy recently acquired formed part of the library of the late Professor J. H. Middleton, whose autograph it bears.—The second edition of Mr. Joseph Pennell's well-known work, *Pen-drawing and Pen-draughtsmen: their Work and their Methods*.

*A Study of the Art of To-day with Technical Suggestions* [London: Macmillan & Co.], has also been added to the Library. Mr. Pennell omits the chapter on architectural pen-drawing, included in the first edition, preferring to recommend Mr. Phenè Spiers's book on the subject. "The aim," says Mr. Pennell, "of the best men who draw architecture is to be as artistic as possible; therefore those who draw architecture are placed with other artists, not apart from them."—Professor Ussing, whose recent attack on Vitruvius will be remembered, continues the discussion in a second pamphlet entitled *Scenica, filologisk-archæologiske Betragtninger i Anledning af Dörpfeld und Reisch, Das griechische Theater*, in which he refers to the differences between Dr. Dörpfeld and Vitruvius, which confirm his view that the author of *De Architectura* was only familiar with the Roman theatre, and that he used Varro as his authority for the Greek.—Mr. J. F. Wadmore has presented a little volume consisting of a couple of Papers which he contributed to *Archæologia Cantiana*. The first of these, "The Knight Hospitallers in Kent," gives a brief historical account of the order, and a detailed list of the properties which it held in various parishes in Kent. It is illustrated, and Mr. Wadmore follows the commendable plan of always giving his authorities. The second Paper is entitled "The Manor of Old Sore and Colepeper Family at Oxenhoath, Kent."—Mr. Alex. Koch, the Editor of *Academy Architecture and Architectural Review*, has now issued the second volume of his interesting and useful publication for the current year, containing illustrations of the year's exhibits at the Academy, the Royal Scottish Academy, the Glasgow Institute of Fine Arts, as well as numerous illustrations of foreign work.—From the Collegio degli Ingegneri ed Architetti in Palermo has been received a copy of the monograph on the late Professor G. B. Filippo Basile's important building the Theatre Massimo at Palermo, and the first part of *I Marmi della Sicilia*, a collection of chromo-lithographs of Sicilian marbles, with letterpress by Professor G. S. Pace.

The Architekten-Verein at Berlin have presented, through Mr. H. Muthesius, the architect attached to the German Embassy in London, the second and greatly enlarged edition of *Berlin und seine Bauten*, a comprehensive work in two volumes containing over a thousand illustrations in the text besides separate plates, plans, &c. It would be difficult to overrate the importance of these carefully compiled, carefully edited, and ex-

cellently produced volumes in the architectural history of a great and famous city; and the thanks of the Institute are due to Mr. Muthesius (who was one of the editors-in-chief) for being immediately instrumental in procuring a copy for the Library.

The *Journal of the British and American Archaeological Society of Rome* has been received from the Society, containing a list of its members and annual report, and numerous papers, including a contribution, by Professor Lanciani, on the Municipal Life of Ancient Rome. Professor Lanciani, in at once a short and an exhaustive account, deals with the tenement houses and *insulae*, the average number of tenants occupying a house, the rules as to the height of houses, the value of rents, the regulations as to street traffic and cabs (*cisia*), the constitution of the police, the public markets, and other matters. A précis of a lecture delivered by Professor Marquand on the sculpture of the Della Robbia school, and other contributions, complete the number.

The *Year Book* of the School of Architecture of Pennsylvania (1897) forms a pleasant little book of its kind, containing numerous illustrations, many of considerable merit, of the students who received awards during the year.—The last quarterly part of the *Architectural Record* contains an article by Jean Schopfer on Wooden Houses in Switzerland. Mr. A. C. Nye, in the same number, explains the characteristics of Chippendale Furniture, and the difference between it and nearly contemporaneous makes with which it is so frequently confused. Mr. Goodyear presents the facts established by the Brooklyn Institute Survey of 1895 with regard to the refinement of curving horizontal lines discovered in Mediæval Italian cloisters and churches, and Mr. Barr Ferree continues his series of articles on French Cathedrals, dealing in the present instalment with those of Provence. The articles are, as usual, plentifully and admirably illustrated.—In the July number of the *Engineering Magazine* Mr. H. H. Statham writes on the disaster which recently occurred at the bazaar in the Rue Jean-Goujon, Paris, and considers generally the question of the safety of temporary structures. Mr. Edwin Sachs has prepared diagrams for the article.

Owing to the courtesy of the Secretary of the Surveyors' Institution, the last six volumes of the *Professional Notes* of that body have been received, so that the set in the Library is now complete.

The President of the Institute has had bound in red morocco, at his own expense, an extremely rare and precious little work of Alberti, entitled *Hectomphila*, which reveals the great Florentine architect in a sentimental aspect. The volume was published in 1534, and was presented to the Library by the late Sir M. D. Wyatt.

## Miscellaneous.

MR. PERY MORRIS, *Student R.I.B.A.*, has been awarded the Cates Prize for Testimonies of Study prepared for the recent Final Examination.

MR. JOHN BURNET [F.], of Glasgow, was recently presented with his portrait by a number of friends as a mark of their esteem, and as a memorial of his golden wedding celebrated in 1895.

MR. JOHN COTTON [F.], of Oxford, the author of *Song and Sentiment*, has recently published another volume of verse under the title of *Thoughts and Fancies* (Simpkin, Marshall).

NEXT session is the Jubilee of the Liverpool Architectural Society. The Council of the Society propose to establish a Travelling Studentship to be awarded at the end of each session.

MR. H. PHILLIPS FLETCHER [A.] has been appointed Surveyor to the Carpenters' Company, in the place of Professor T. Roger Smith [F.], who had held the appointment for many years, and who has now joined the Court of the Company.

THE MEXICAN GOVERNMENT invite competitive designs for their proposed new Houses of Legislature, to be built at a cost of 1,500,000 dollars. The conditions of competition may be seen in the Library.

THE INSTITUTE has subscribed ten guineas to the fund being raised for the Leighton Memorial, which is to take the shape of an altar-tomb to be placed in the north aisle of the nave of St. Paul's. Mr. Brock, R.A., has been entrusted with the work.

THE decease is regretfully recorded of the following members:—On 12th April, Charles James Gladman, *Associate*, elected in 1881. On 23rd inst., George Elkington, *Fellow*, elected in 1854, and transferred to the Class of Retired Fellows in 1895.

MR. JOHN RENNIE COCKERELL, late of the Madras Civil Service, whose death was recently announced in his sixty-seventh year, was the second son of the late Charles Robert Cockerell, R.A., Royal Gold Medallist 1848, and President 1860.

MR. ALMA TADEMA [H.A.], R.A., receives one of the five gold medals in the Fine Arts section of the Brussels Exhibition, two others going to French and two to Belgian artists. Mr. J. L. Pearson [F.], R.A., F.S.A., has gained the only medal awarded for architecture.

MR. FRANCIS W. BEDFORD [A.] has been appointed one of the Hon. Secretaries of Section II. (Architecture and Engineering) of the Sanitary Congress to be held at Leeds in September. Gentlemen willing to read Papers in this section should communicate with Mr. Bedford at 12, East Parade, Leeds.

THE programme for the next session of the Sheffield Society of Architects includes the following Papers by members of the Institute:—“Eighteenth-century Architecture,” by Mr. J. Alfred Gotch [F.], F.S.A.; “The Warming of Public Buildings,” by Mr. F. R. Farrow [F.]; and “Proportion,” by Mr. Hugh Stannus [F.].

## THE OWEN JONES STUDENTSHIP 1896.

## MR. H. C. CORLETTE'S TOUR IN FRANCE.

I will indicate the parts of the country through which my companion, Mr. S. Carey Curtis, and myself passed if I state the names of the towns that we saw from Dieppe to St. Savin. They were first Tôtes, then Rouen, Pont de l'Arche, Louviers, Evreux, Nonancourt, Dreux, Chartres, Châteaudun, Blois, Montrichard, Loches, Châtillon, Le Blanc, and St. Savin. At Rouen, Evreux, and Chartres we saw chiefly glass, and also at Dreux, where much really good old glass still remains in excellent preservation. In the apse, high up, are large single figures in each light, a fine effect being produced by the blue ground in which they were placed. This blue ground may be of recent date, as the glass was more or less “restored” in the forties and fifties; but whether the arrangement be the result of re-setting or not, the general effect is good. The Church of St. Pierre, in Chartres, we found after a little searching. It was dirty, but full of lovely glass, finer than some of the same date which we saw later in the cathedral. In the apse are twelve large panels of the apostles done in Limoges enamel. The colour in these seems weak and poor, in contrast with the brilliance and depth of colour in all the windows. St. Aignon, another church, has been painted up, from top to bottom, in a marvellous fashion. The colouring is bad, as is also the case with most of the designs, of which there is a large collection. The work possesses no sense of unity, and all feeling of repose is banished from an otherwise fine interior. The eye has to penetrate all the applied contrivances before it can perceive the excellent skeleton they seem designed to hide. The glass in the cathedral is so well known that it is unnecessary to do more than state that, as a book of lessons on proportion and subordination in colour-grouping, and the value of line in polychrome decoration, it should be studied by all who presume to a knowledge of such work as was produced in this branch of craftsmanship.

Between Châteaudun and Blois we saw in the small church at Charray some old colour work on the roof. The ceiling was arched in form, and the colours used were red, black, white, yellow, and here and there slight traces of green. All the shades were quiet in tone, no one being more noticeable than another.

In the château at Blois there is good work,

in which brick and stone have been skilfully combined ; but, unfortunately, we were not able to see as much there as we had hoped. The church at Loches was interesting, but the only appearance of colour noticeable was that on the richly carved west doorway within the large vaulted porch. From this point we rode through Chatillon and Le Blanc to St. Savin, where we examined the Abbey Church. This is quite a surprising design internally. From the west end there is a descent by a number of steps into the nave through a large porch the barrel vault of which is covered with paintings. The walling above the door which leads into the nave from the porch is also painted. In the nave the visitor is impressed, first by the great height of the columns which carry the arcade, and then by the great length to the intricacies of the columns and chapels at the east end, beyond the choir and chancel. Then the comparative narrowness of the nave becomes evident, in relation to the height of its painted barrel vault from the floor. You next realise, as a part of your first impression, that the aisles, too, are narrow and barrelled, with the round arches of the nave arcade running into them and forming intersections. High up in the side walls north and south, and centered between the arcade piers, are the windows, very simply splayed and roundheaded. All the walling and vaulting inside the building is plastered, and on this plaster, which is very thick, the colour decoration has been done.

To study colour in its connection with building it is always necessary to refer to and constantly consider all the forms to which it is applied, or of which structurally it forms a part. To do this properly, in the particular instance we had decided to study, it became necessary to measure completely the whole building. Thus alone were we able to obtain drawings which would enable us to form some true idea of the relation of the various scales of colour, of form, and the ruling and subject proportions, which, united in one whole, were the elements which produced the quiet grandeur of all this mass of works in unity combined. There is no such thing as mathematical precision and regularity in the building. The setting out of large dimensions is accurate within certain limits, but exact likeness in similar parts was not the sole end at which the designer and designers aimed. The arches from pier to pier in the chancel are all different, though similar, and each becomes less in span as the eastern one is approached. The chapels round the apse of the chancel are all very irregular on plan. They have semicircular barrel-vaults which fall over and meet the segmental ends. The arches of the nave arcade are not moulded at all, but painted only on the plaster, and the manner in which this has been applied is in no way an imitation of moulding. The decoration thus applied is designed as an application, and not, as is too often

the case, by using one method instead of another, and adopting for the new treatment those characteristics which are peculiar to the character inherent in the one supplanted. In the spandrels of the arcades are large painted figures. The columns all down the nave have simple moulded abaci and boldly carved lower parts to the caps. Their only base now is an extra thickness of plaster. But in one case, where the floor paving stones were torn up, and some of the plastering of the columns removed, a large base was visible, which, to judge by the mouldings, would make the original floor level at least eighteen inches or two feet lower than it is at present. From base to cap of all the columns the plastering — which is about half an inch thick — is covered with a peculiar striped colouring set on in spiral form. It is not unpleasant in appearance, but that now visible is a restoration, painted over what was there originally. We were told that the lines of this were the same as were the old ; but in what degree this statement may be accepted as applying to a like similarity between the new colouring and that defaced none, perhaps, can tell. Two of the columns near the west end were on one face covered with patterns and figure work similar to some in the chancel, transept, and chapels. These patterns are to be found all over the church in great variety. Above the porch at the west end and in the tower is a large apartment known as the tribune. Its walls are still covered with remains of painting in much the same style as that in the nave and porch. So much of this work as is still preserved leads rather to the conclusion that it was done later than what appears in other parts of the church, as the drawing is better in some instances. One subject in this series was evidently the descent from the Cross. Most of the others consist of representations of the bishops and saints of the church.

All the vaulting over the nave, from the eastern face of the western porch to the western arch of the tower at the crossing, is richly and beautifully painted. Except where the plastering has been entirely lost, this is all in excellent preservation. The subjects of all this decoration are derived from sacred history. An architect is not so equipped that he is able to make studies of painting as well as should be the case were his whole time given to the practising and development of this means of expression, as is the case with a painter. So these notes of the colour schemes in their decorative effect must fall below the standard that would be necessary to present adequately the particular features of the work. But, nevertheless, they are perhaps a record sufficiently accurate to indicate to others in a general manner what the work is like in its present condition. The chief object before my mind was to try and represent with truth the relative value of the different colours used, so far as they were purely decorative

in their original intention. In doing this it was necessary also to observe and in a measure represent the differences of surface which were noticeable. For unless the texture of a material be used as a means of expressing its characteristics, much interest and power is lost. It should never be dealt with so that it is made to seem something other than it is. The effect, good or bad, of any decorative work very largely depends upon a recognition and use of such qualities as a part really of any design. It is the same whether this design is an application only to a surface, or whether it is more purely structural in its decorative use. Much of the objection we hear to some recent work may be traced as being probably caused by a thoughtless disregard of these matters both by the architect or other craftsmen.

The decoration of the chancel is very different from that in the nave. The vault is higher, and the sizes of the relative parts are much smaller. This has naturally claimed a difference in treatment: the surfaces are more divided, and the proportions are dealt with as the change in scale has required. The vault, and its termination in the apse, are here decorated in purely conventional forms, which, in their disposition, partake of a somewhat geometric character. The many small chapels congregated round the main apse were evidently at one time profusely covered with rich decorations: these have largely disappeared. But those parts the decoration of which still remains complete sufficiently indicate the extreme richness and delicate care with which they originally were furnished. Unfortunately, no old glass remains. The pavements are mere flagstones, and the only other decorations are the wet bright green patches which cluster thickly along the lower parts of the aisle walls of the nave. No doubt this is accounted for by the difference between the floor and the level of the ground outside, the absence of asphalte, and the want of a damp-course. It has been said, "They dreamt not of a perishable home who thus could build." Perhaps not, or they would have made better provision.

While still staying at St. Savin, we on one occasion rode out to Montmorillon, and there saw some colour-work in the lower chapel of what we understood was known as the octagon. This, though designed in the same peculiar minor themes of colour, was in far better condition than any of that we were studying in the Abbey Church. It was all figure-work, and has very distinct indications of Greek feeling in it, combined with some features we are accustomed to associate with our thoughts of Gothic work of an early date. This is a result, no doubt, of the Byzantine relations with some of the southern parts of France.

Leaving St. Savin we passed through Poitiers, Civray, and Souillac, seeing little but restored colour, and went on to Albi. Here is a magni-

ficient piece of building, a figure of stately dignity and real grandeur. The interior is truly splendid and thrilling, comprising within itself immense bold size, and the most delicate and cultured sensibility of finished craftsmanship. The whole of the vast expanse of the vault is covered with decoration by foliage and figures. The groundwork is a lovely blue on which the scrolling leafage and enveloped flowers with figures are drawn in white, softened by a shadowy grey; and the points to which this all is subordinate are groups of saints and angels, painted in rich fresh colouring, set about in burnished gold.

That Cecilia is the patron saint of the church perhaps accounts for the unusual beauties of the choir, which, besides its rich and delicate tracery and canopy work, possesses some of the best Gothic sculpture, in date belonging to the latter part of the fifteenth century. Each figure, cut in a fine grained stone, is painted, and stands in its niche. A few are a little mutilated, the others are in good condition. Of these figures, seventy-two are statuettes of angels, and the rest are of the apostles, saints, and prophets. Under the organ at the west is some work which has been painted directly on to the huge brick walls, circular on plan, of two of the tower supports. The lines of all the brick jointing show through the thin coat of paint on account of the absence of any plaster ground. The result is interesting and beautiful, more especially as the drawing of the very numerous figures has not suffered in the least. The colouring, too, is still fresh and good. M. l'Abbé Graule, who by his office in connection with the Cathedral, and his extreme kindness, enabled us to proceed with our work without trouble of any kind, said on one occasion that he understood that the blue ground of the vault had been painted with indigo. But if any form of indigo was used it was one of a very different hue from the pigment we now know by that name. From another source of information we learned that oxide of copper produced the blue which was used. Whatever may have been the medium there, it now is apparently as good as when it was done 400 years ago. Fortunately it has been very little, if ever, restored. The walls of the various chapels, in fact, nearly all the vertical surfaces, have been painted with a very grotesque type of work, extremely offensive; it is, perhaps, partly atoned for by the rest of the interior being, both in structure and effect, so thoroughly beautiful.

I should particularly like to take this opportunity to acknowledge, on behalf of my friend and myself, the great courtesy and kindness shown us by all of those whose work continually required their presence in the cathedral. Especially have we to thank the Archbishop for the many visits he paid us while at work in the church, and for his invitation to visit him at the palace, where he personally showed and explained to us all the many

points of interest which his historic residence contains. At St. Savin, also, we met with the same thorough kindness from the several priests who were there. They took the keenest interest in the fabric of the church, and were so kindly full of appreciation and interest in what we had done.

Having finished what we had proposed to ourselves at Albi, we set out upon the third section of our journey. This was to lead us—first to Perpignan, where we hoped to find work for at least a few days, then to St. Savin, near Argèles, in the Pyrenees. The direction we took was through Toulouse, Carcassonne, Narbonne, and then along the Mediterranean to Perpignan. The church at l'Isle d'Albi is decorated in colour which is modern, but no doubt replaces, so far as that is possible, the original painting. At Rabastens there is also a great deal of colour about the interior, especially in the chancel, both in figure drawing and decorative work. In spite of the usual restoration, it contains plenty of suggestion in some of the spaces on the walls. In the apse of the cathedral church in Toulouse there is some fine glass.

The original cathedral at Carcassonne, which stands within the walls of the fortified city, is extremely interesting. The vaulting of the choir and apse bears just sufficient traces to show that it was once covered with colour decoration of apparently good design. Unfortunately, they are only traces. Nevertheless, the church contains some very beautiful glass, which is most interesting in the subjects of design, the excellence of drawing, the general arrangement of colouring, the quality and tone of colour in the glass, and the technical skill its building manifestly required.

The cathedral at Narbonne, or what there is of it, soars grandly up to immense heights in the slenderly lined interior. There is much good glass, and some of the tombs retain colouring, but most of it is rather indistinct.

With Perpignan we were greatly disappointed in our expectations of finding good colour. There were two good reredoses, one possessing some colour, most of it being in the form of panels, pictorially filled.

Finding little inducement to remain, we pushed on through the Pyrenees towards another St. Savin, near Argèles. Some of the churches in the numerous villages and towns through which our route took us possessed slight indications of having been at one time well decorated; but so many had been restored. The peculiarly situated cathedral of St. Bertrand, near St. Gaudens, contains in the enclosed choir much inlaid work in wood. The colour is all restoration. As with Perpignan, so it was at St. Savin in the Pyrenees. To see this last place we had gone much out of our way only to find disappointment. There was no colour such as we sought, only a few bad and uninteresting pictures.

Between this last-mentioned place and Bordeaux, we came across little to detain us. Arriving there,

we saw what we could of the city during an afternoon, and left for Paris and London the same evening.

HUBERT C. CORLETTE,  
*Owen Jones Student 1896.*

## REVIEWS. LVII.

(158)

### VENTILATION AND HEATING.

*Ventilation and Heating.* By John S. Billings, A.M., M.D., LL.D., Edin. and Harvard, D.C.L., Oron. 80. New York, 1893. Price 25s. [R. J. Bush, 92 & 93, Fleet Street, London, E.C.]

*American Steam and Hot-water Heating Practice: Being a selected Reprint of Descriptive Articles, Questions, and Answers from the "Engineering Record."* 40. New York, 1896. Price 16s. post free. [R. J. Bush, 92 & 93, Fleet Street, London, E.C.]

Two books have recently been brought under my notice dealing with the important subjects of Heating and Ventilation, a knowledge of which is valuable to every one, but especially to architects. Hygiene, as a study, is receiving more attention now than ever it did, and rightly so, for on a knowledge of it depends largely the difference between the sickness and health of the individual and the community. Almost too much is demanded of the architect in the present day; but if we are to keep abreast of the requirements of the age it is vitally important that we should add to our sum of knowledge this branch also. From the impossibility to find time on the part of some already overburdened architects, and from distaste of the subject on the part of others, a class of specialists has sprung up. These are often of very great help in the initiation and developing of comprehensive schemes of ventilation for large and important buildings. But as amongst specialists there are many diverse theories and opinions, it behoves all architects, if they are unable to master the subject sufficiently to undertake such work themselves, yet to know enough to have clear ideas as to the system best suited to the requirements of their buildings, and to arrange their plans accordingly.

It must always be borne in mind that the climate, the country, and the people are to be considered in all treatises written upon these special subjects. Many most excellent books have been written by English authors, and many also by American writers and others; but in adapting their statistics, data, and conclusions these differences I have referred to must always be taken into consideration.

In Canada and the northern part of the United States, where, as a rule, the changes of temperature are great, some system of artificial heating is essential, and what is the exception in Great Britain is the rule there.

It is a constant wonder to those who visit England in winter to see how the raw chilliness,

cold, and consequent discomfort of the houses, is endured—a state of things which would not be tolerated in the United States or Canada. I think it must be admitted that the open fire, however delightful an institution it may be, is neither a satisfactory nor a scientific mode of heating houses and buildings. Of recent years many inquiries have been made as to the best systems of heating, and many have been tried; it is therefore opportune that this subject in all its bearings, in conjunction with ventilation, should have been treated so fully and so ably in the two books to which I have referred, viz., *Ventilation and Heating*, by Dr. Billings, published by "The Engineering Record," of New York, and *American Steam and Hot-water Heating Practice*, being a reprint of selected articles, &c., which originally appeared in that journal.

Dr. Billings needs no introduction to English readers; he is already well known by his previous writings, and by his researches in hygiene and hospital arrangements, and is the Director of Hygiene in the University of Pennsylvania. This recent book, published in 1893, includes all that is practically important in his previous work on the *Principles of Ventilation and Heating*, and in addition contains a great deal of new valuable matter, and over 200 diagrams and illustrations. The work is divided into twenty chapters.

The introductory chapters treat of the utility of ventilation, and the evolution of efforts in that direction, the properties of the atmosphere, of carbonic acid, &c. Then come chapters on the physiology of respiration, moisture in the air, the quantity of air required for ventilation, the forces concerned in the process, and the various methods of testing. Then special modes of heating, the theory and methods of testing air currents, the devices adopted by various ventilating engineers, examples of buildings, such as hospitals, schools, dwellings, &c., are given with clearly shown diagrams, plans, and sections of the various methods.

The plans and sections of many important public buildings, such as the New York Hospital, the Johns Hopkins Hospital, the Capitol, the Lenox Lyceum, the Grand Opera House in Vienna, the Opera House at Frankfort, and many churches and schools will be found convenient for ready reference. The book closes with a chapter on the ventilating of tunnels, ships, railway cars, prisons, &c. The work is treated—perhaps naturally enough—from an American point of view, and shares, in common with much of modern United States literature, the fault of not giving sufficient credit to the researches and achievements of distinguished experts in other countries, and of ignoring thereby valuable work. This fault is sometimes the result of ignorance, but oftener from an almost unconscious overweening national pride. Dr. Billings, however, has made a valuable contribution to the literature of ventilation and heating.

The second book we have referred to confines itself chiefly to heating by steam and hot water, and only incidentally treats of ventilation, and is a collection of selected examples of heating plans and arrangements of a large number of modern buildings which appeared from time to time in the pages of the *Engineering Record*. They are here collected in a convenient shape for reference, and liberally illustrated; and as the book also embraces a collection of questions and answers on problems connected with this subject, it is eminently practical and not at all theoretical, and will therefore commend itself to practical men. Amongst the examples given are a number of modern residences, churches, schools, theatres, hospitals, &c.

In closing I would strongly recommend a perusal of these two books to all who are of an open mind and an inquiring disposition, and who desire to know what earnest men in the United States are doing to solve problems vital to the interests of the whole community.

Montreal, June 1897. ANDREW T. TAYLOR.

## MINUTES. XVII.

### SPECIAL GENERAL MEETING.

#### CONFIRMATION OF RESOLUTIONS *re* ALTERATION OF BY-LAWS.

At Special General Meeting held Monday, 12th July 1897, at 8 p.m., Mr. H. L. Florence, Vice-President, in the Chair, the Minutes of the Meeting for the presentation of the Royal Gold Medal, held 28th June 1897 [p. 408], were taken as read and signed as correct.

Mr. Francis Hooper [F.], attending for the first time since his election to the class of Fellows, was formally admitted and signed the Register.

The Minutes [pp. 395-96] of the Adjourned Special General Meeting for the consideration of the Council's amended Report on the Fellows Question being put for confirmation, and Mr. Sydney B. Beale [A.] objecting that the said Minutes were incomplete, and, seconded by Mr. C. H. Brodie [A.], moving their amendment by the insertion of certain words, the sense of the Meeting was taken by show of hands, whereupon, a majority of seventeen to fifteen declaring in favour of the Minutes as printed, the same were forthwith passed and signed as correct.

The Resolutions passed at the Adjourned Special General Meeting of the 14th June in reference to the additions to By-laws 9 and 15 having been read as printed at page 396, it was

RESOLVED, with one dissentient, that the Resolution of the Royal Institute passed at the Adjourned Special General Meeting of the 14th June in reference to the proviso to be added to By-law 9 be confirmed.

It was also

RESOLVED, *nem. con.*, that the Resolution passed at the same Meeting in reference to the proviso to be added to clause (a), By-law 15, be confirmed.

The Secretary announced the results of the Preliminary and Intermediate Examinations held in London, Manchester, and Bristol, and of the Final and Special Examinations held in London, during the month of June, and read the names of candidates who had passed [see pp. 418 sqq.].

The proceedings then closed, and the Meeting separated at 9 p.m.

